



IBM System z Technical Conference Dresden – Germany – May 5-9



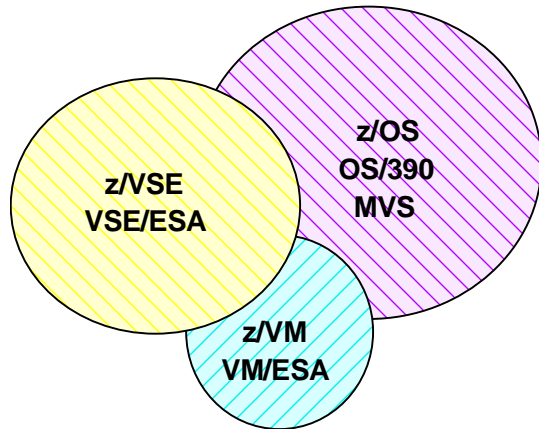
## E42 - z/VSE V4 Functions and Sub-capacity Pricing

Dr. Klaus Goebel

z/VSE Systems Mgr., [kgoebel@de.ibm.com](mailto:kgoebel@de.ibm.com)

# Operating Systems on IBM System z

§ 33% of worldwide traditional mainframe operating system installs are z/VSE or VSE/ESA



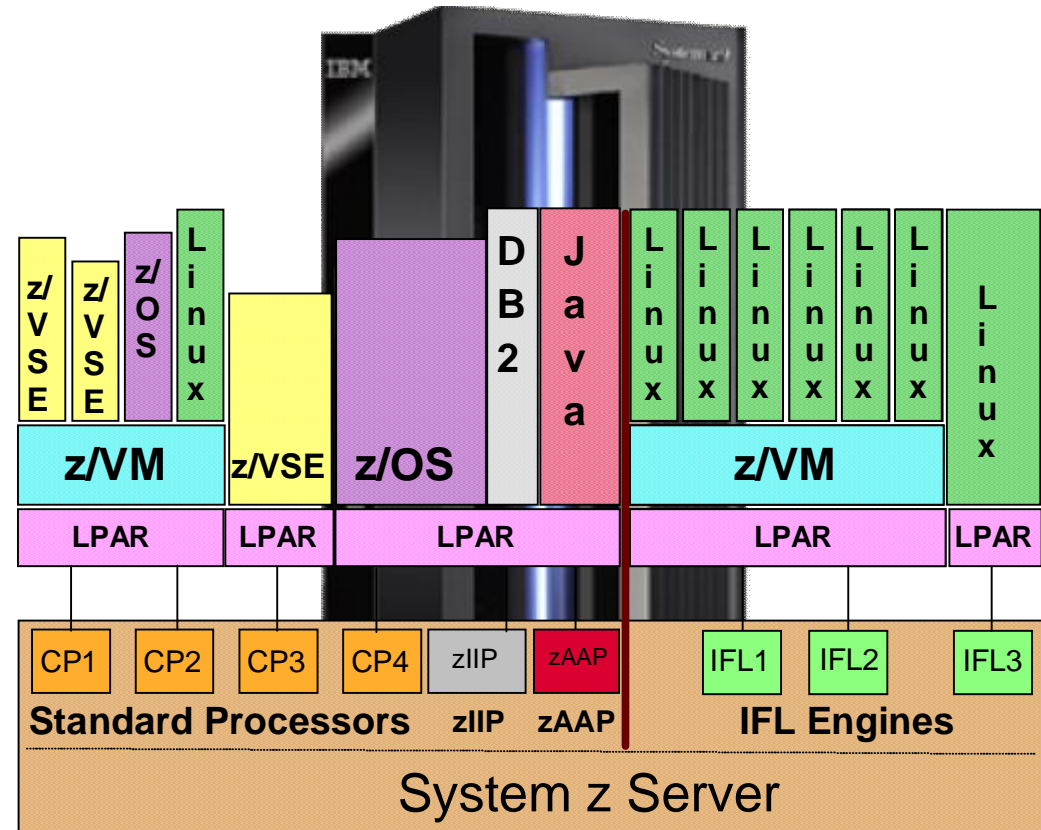
§ VSE\* population is 40% in US, 40% in Europe, 20% in RoW

§ Worldwide 50% run VSE under VM, in Europe 90+% are VSE under VM

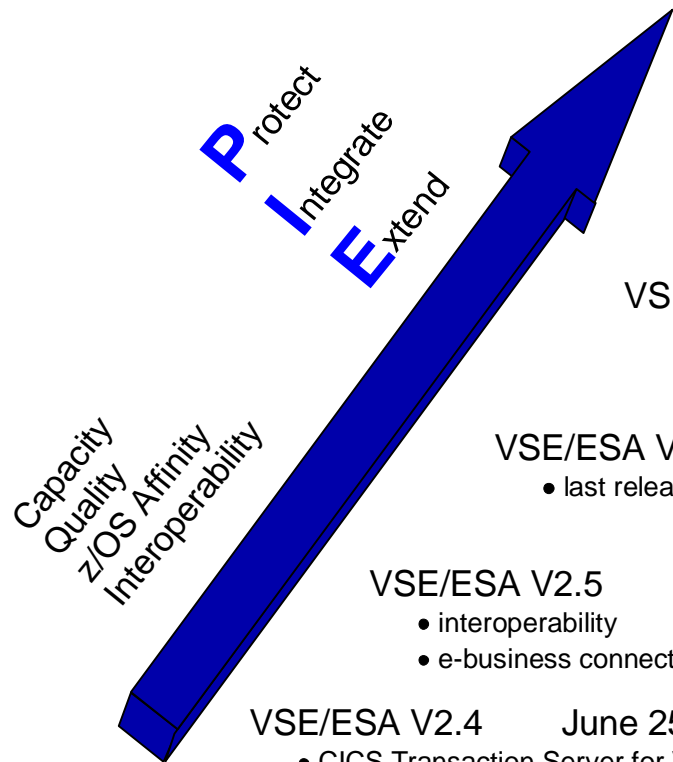
§ IFLs play an important role in VSE's strategy

§ zIIP/zAAP have no meaning to VSE

(\*) The term "VSE" stands for both, VSE/ESA and z/VSE.



# z/VSE Evolution and its Success Factors



**VSE/ESA V2.4**      June 25, 1999

- CICS Transaction Server for VSE/ESA
- e-business

**VSE/ESA V2.5**      Sept 29, 2000

- interoperability
- e-business connectors

**VSE/ESA V2.6**      Dec 14, 2001

- last release to support pre-G5 servers

**VSE/ESA V2.7**      March 14, 2003

- enhanced interoperability
- ALS2 servers only

**z/VSE V3.1\***      March 4, 2005

- zSeries features, FCP/SCSI
- 31-bit mode only

**z/VSE V4.1**      March 16, 2007

- z/Architecture only
- 64-bit real addressing
- MWLC full & sub-cap pricing

**z/VSE V4.2 - Preview Oct 9, 2007**

- More tasks, more memory
- EF for z/VSE, SCRT on z/VSE
- SoD for CICS/VSE

**Future**

**Pricing**

**Rebranding**

**Strategy**

# Agenda

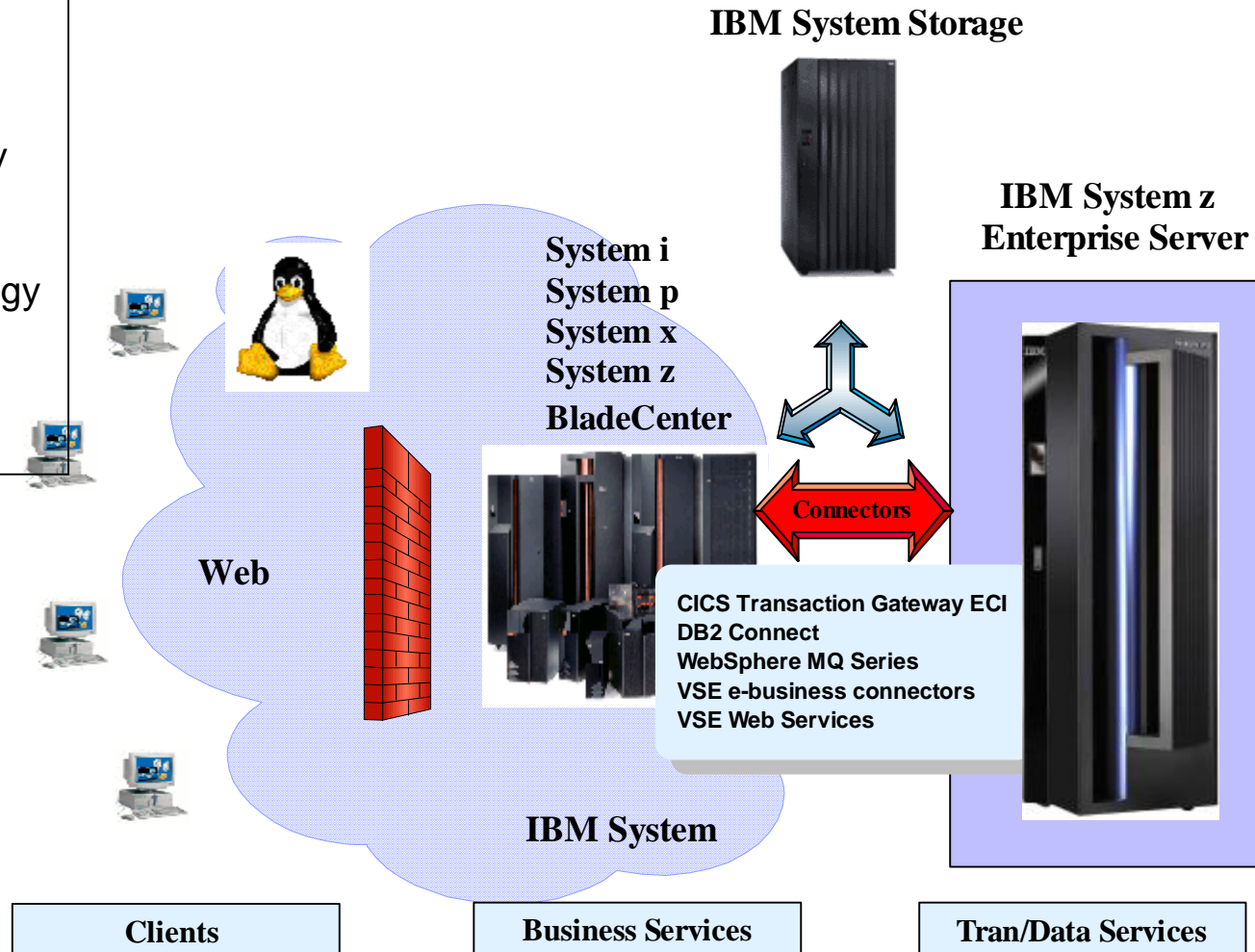
- **1. Strategy**
  - 2. Rebranding**
  - 3. Pricing**
  - 4. Future**
- 
- § **Customer Examples**



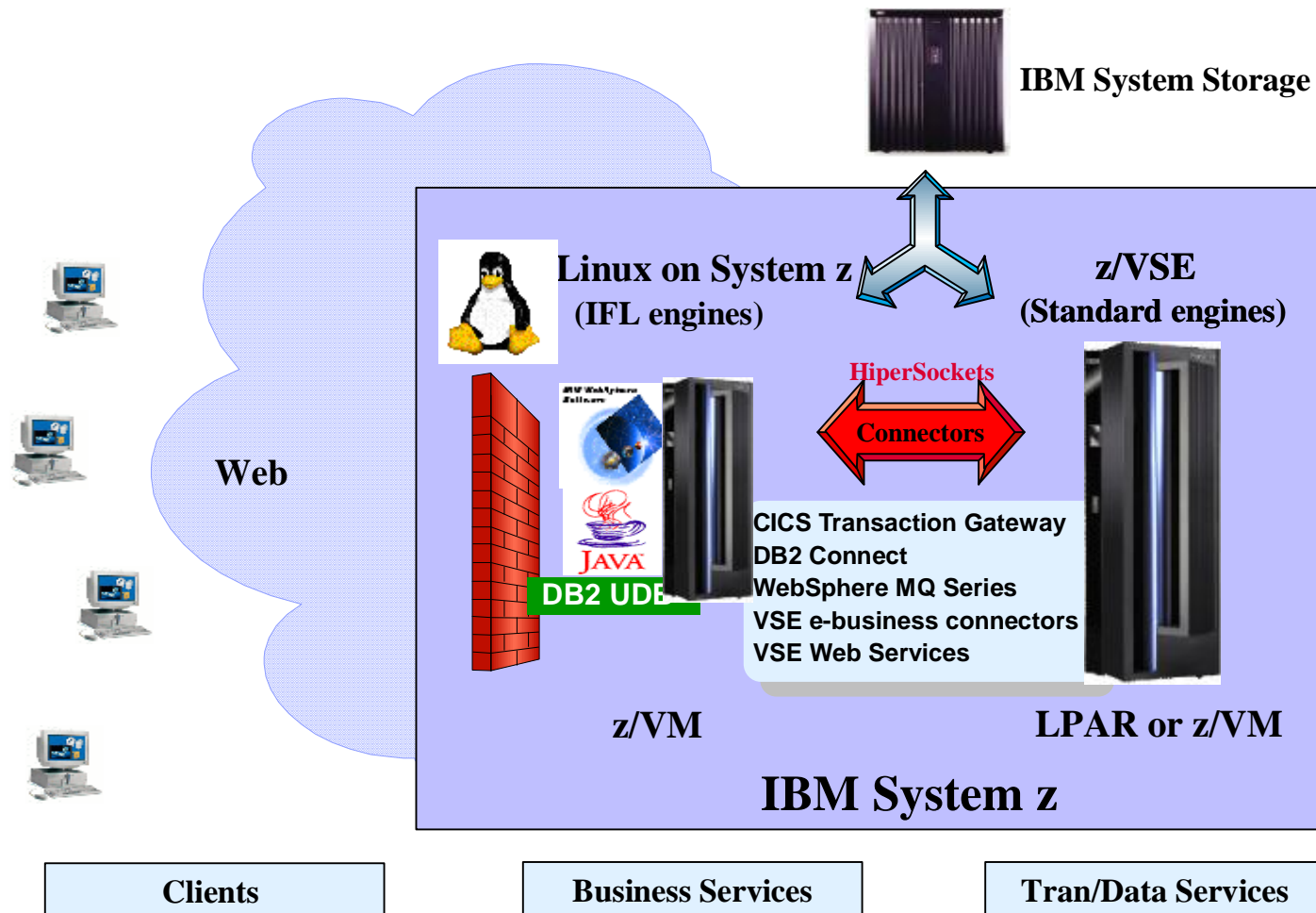
# z/VSE Strategy

alias

- § 3-tier Strategy
- § Connector Strategy
- § Migration Strategy
- § Coexistence Strategy
- § Linux Strategy
- § **PIE Strategy**



# z/VSE Strategy with Linux on System z



# z/VSE Strategy “easy as P I E”



## Protect

existing investment

- § Existing core applications continue to run unchanged
- § Continuous follow-on development for HW and SW
  - from S/390 via zSeries to IBM System z
  - from VSE/ESA to z/VSE
- § z/VSE is the platform of choice for transaction oriented core applications with CICS
- § Excellent support from IBM Lab in Boeblingen & Poughkeepsie
  - z/VSE worldwide development is located in Boeblingen --> deep skills available
  - PoC – Proof of Concept (customer individual)
  - Briefings (customer individual)

## Integrate

with IBM middleware using connectors

- § Integration of z/VSE into heterogeneous environments
- § z/VSE is a very stable operating system that can easily be connected to open systems (Linux)
  - access to external data (e.g. on Linux) or programs (e.g. Java) via standard connectors or via free of charge VSE specific connectors
  - exploitation of HiperSockets within the server – no physical network outside the box

## Extend

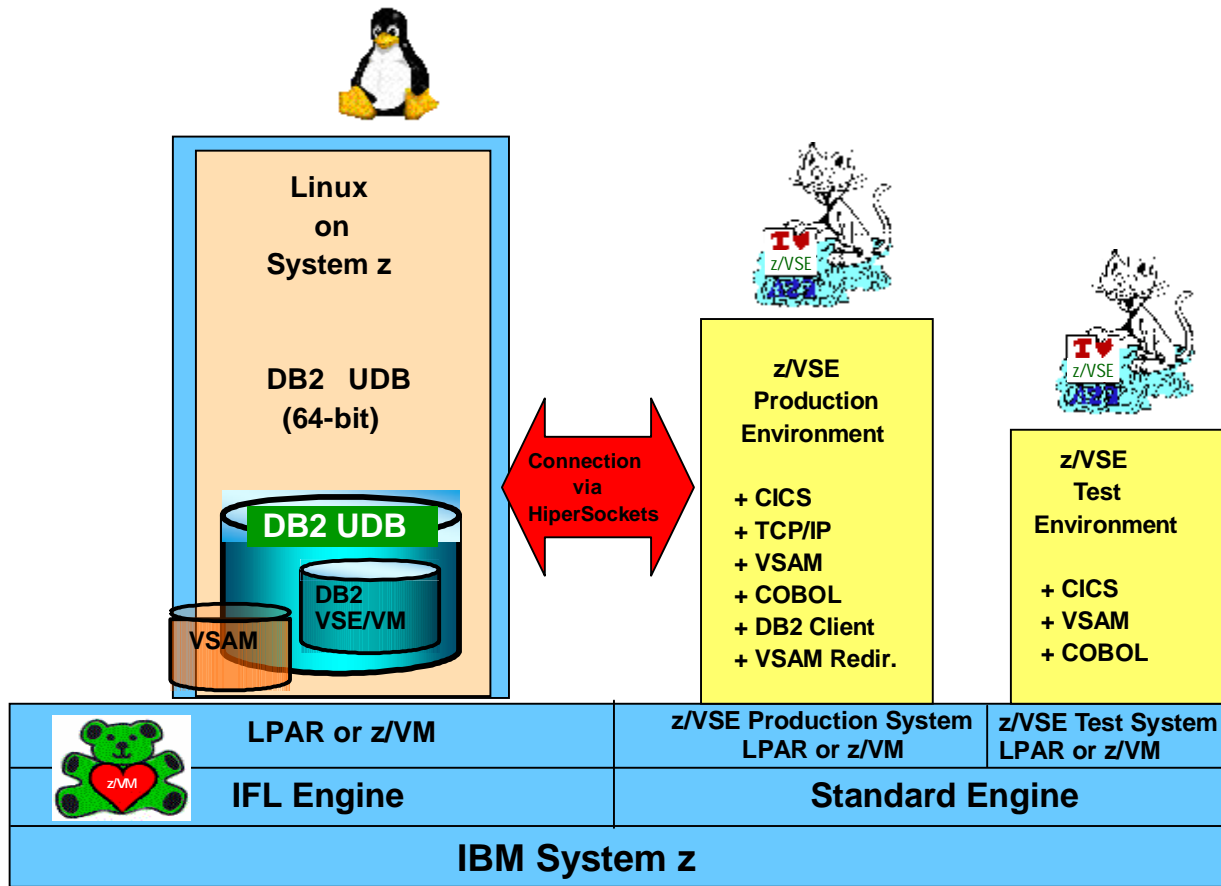
with Linux on System z

- § Extension of existing solutions with Linux on System z
- § Cooperation and coexistence with Linux on System z and z/VM
- § z/VSE is open and connectable to various different client/server platforms



# Scenario 1: DB2 LUW for z/VSE Customers

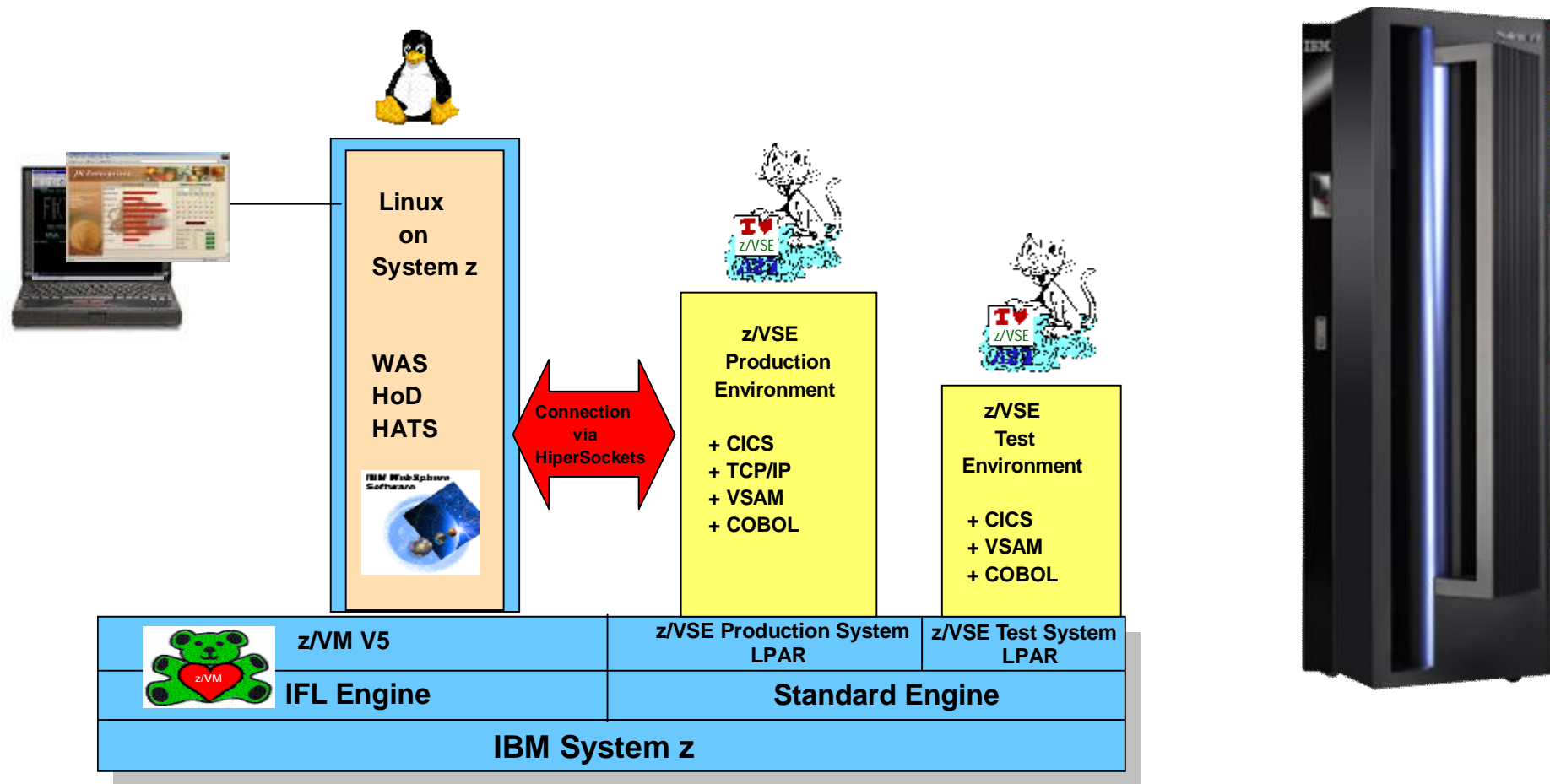
Data consolidation and data warehouse solutions with DB2 UDB on System z





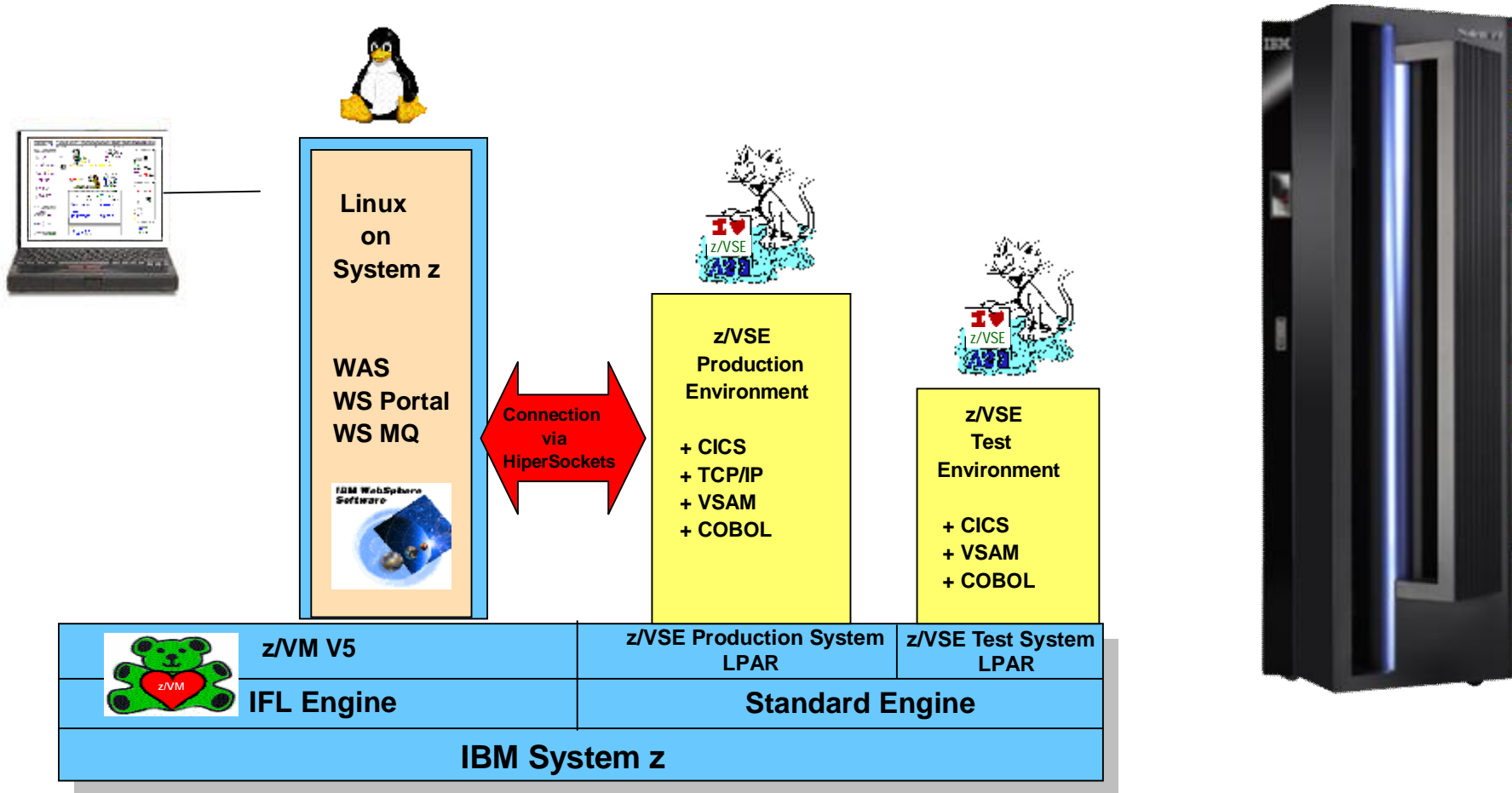
# Scenario 2: „Webification“ for z/VSE Applications

Web enable existing applications with Inter/Intranet frontend



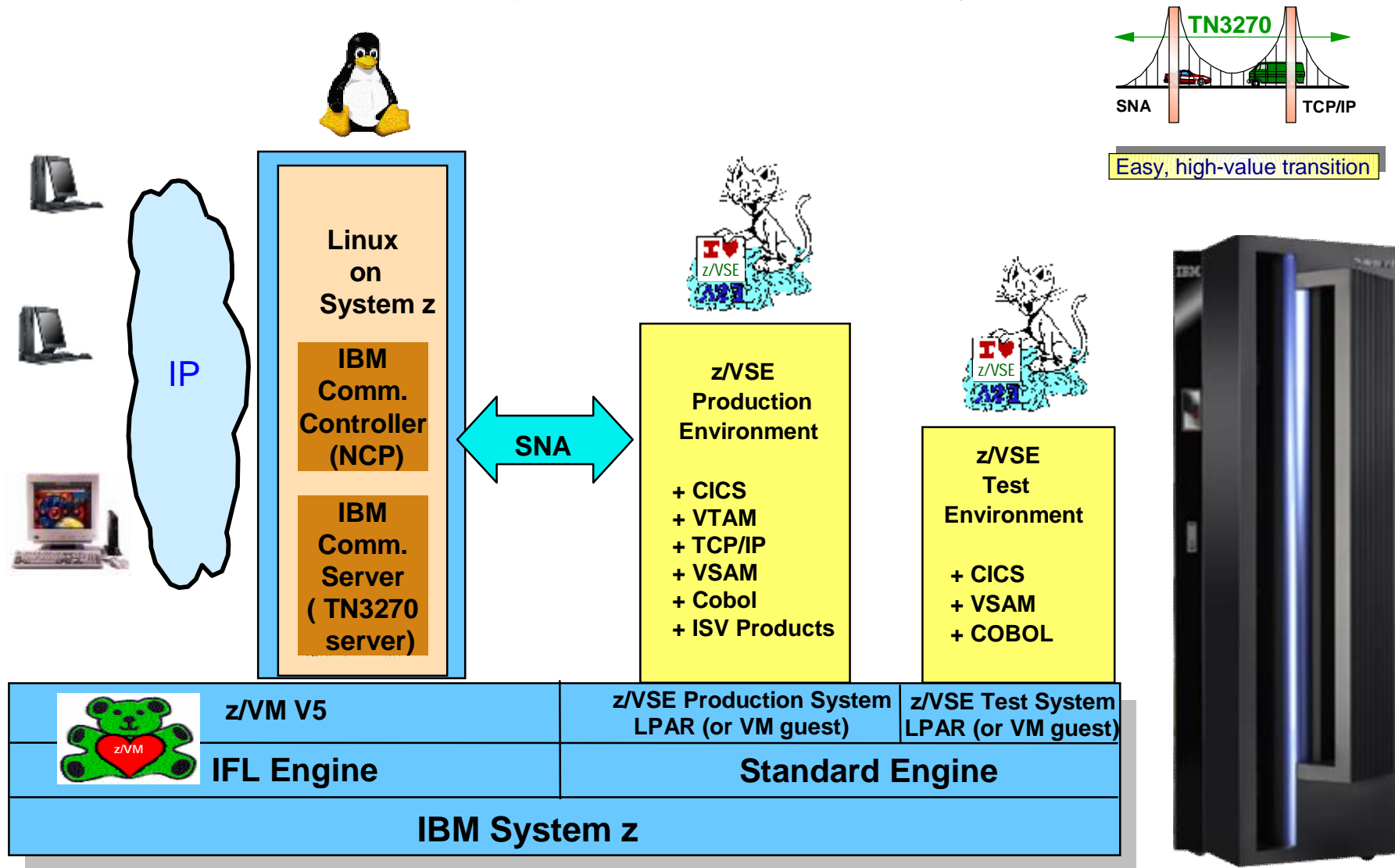
# Scenario 3: WebSphere Portal for z/VSE Customers

A portal for administration and integration of employees / customers / providers



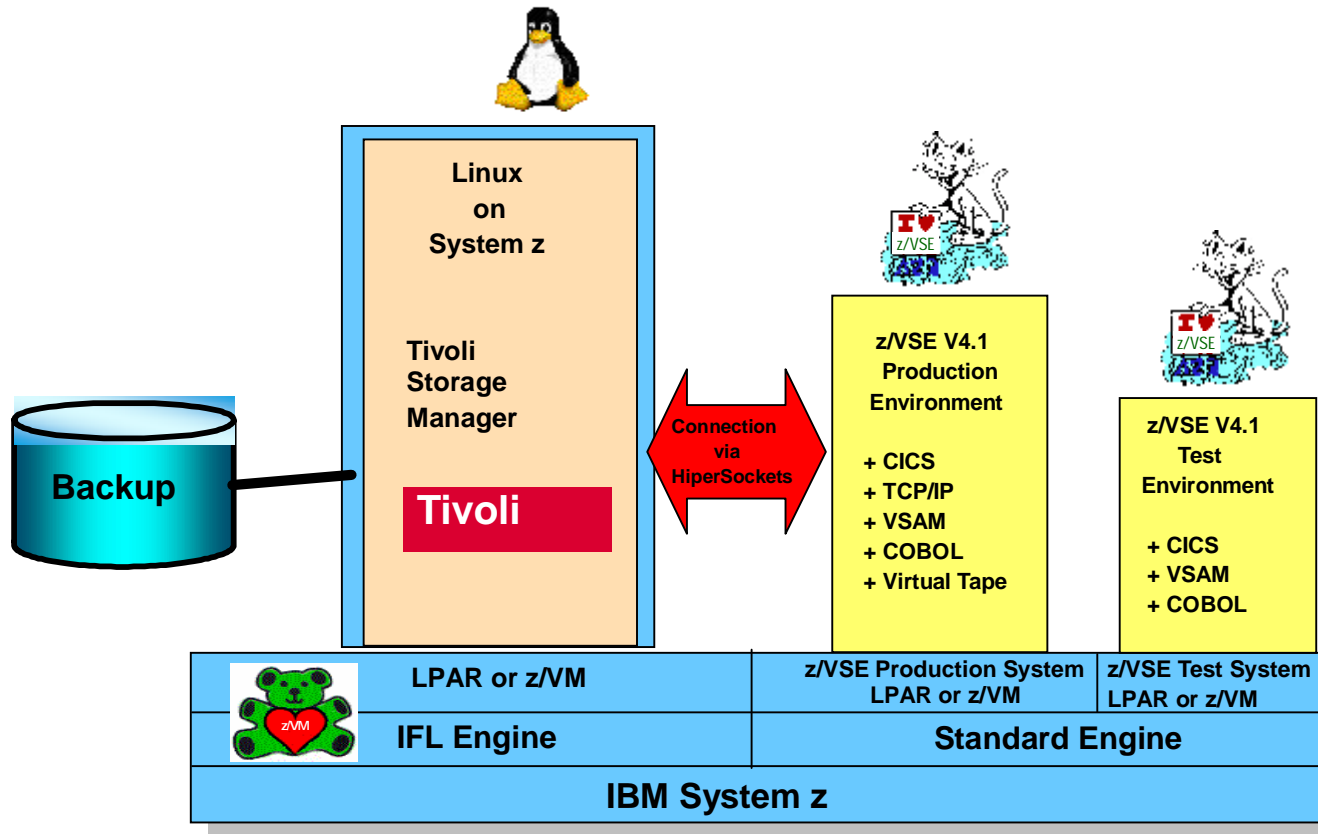
# Scenario 4: Network Infrastructure Simplification

3745/46 (NCP) and TN3270 replacement with Linux on System z



# Scenario 5: Backup/Restore Concepts for z/VSE

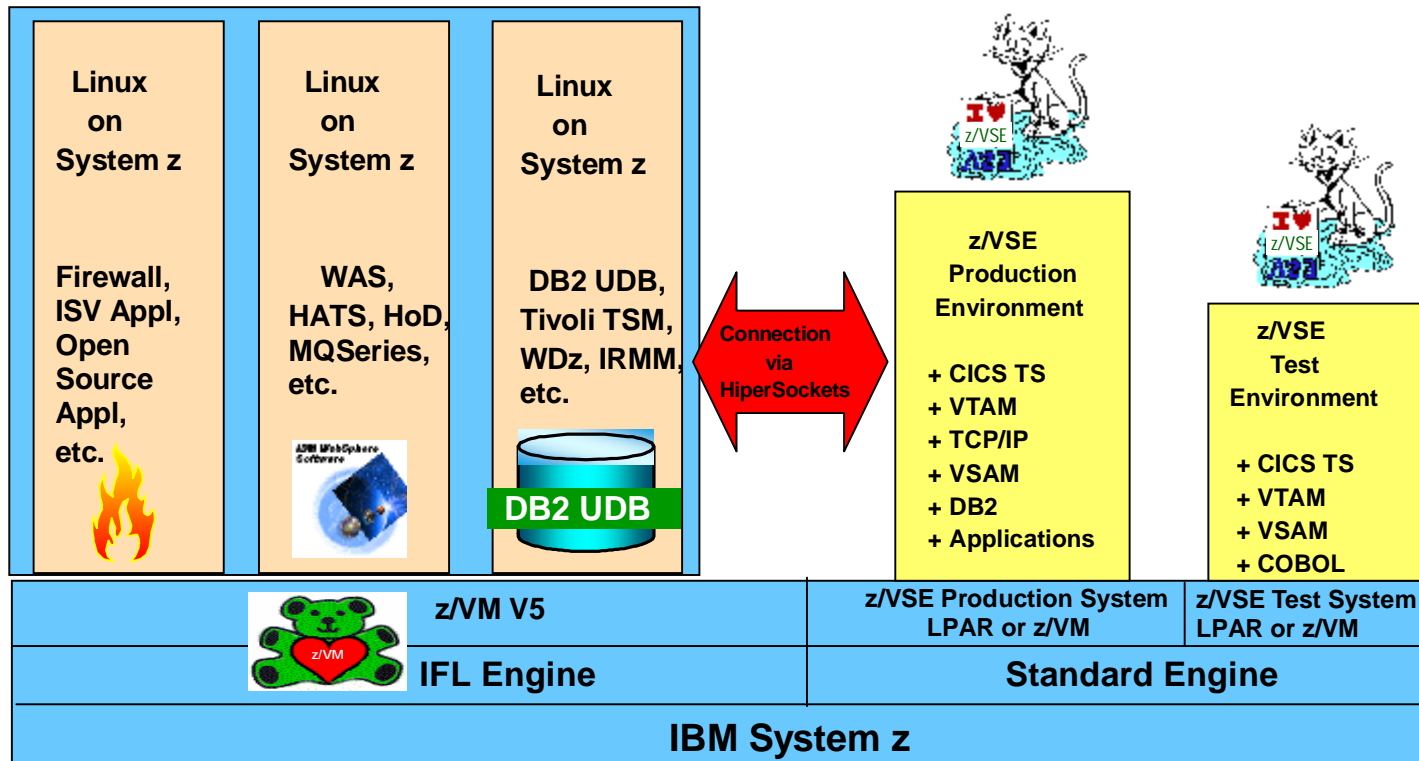
Integrate z/VSE with TSM on Linux on System z



# Summary: z/VSE's **PIE** Strategy w/ Linux on System z

## Keep and grow VSE customers on the platform

- P**rotect existing VSE investments
- I**ntegrate using middleware and VSE connectors
- E**xtend with Linux on IBM System z technology & solutions



# Agenda

1. Strategy



2. Rebranding

3. Pricing

4. Future

§ Customer Examples



# z/VSE Rebranding and added Functionality

## § Rebranding, reversioning, repricing

- ▶ 3/2005: VSE/ESA Version 2 à z/VSE Version 3 \*
- ▶ 3/2007: z/VSE Version 3 à z/VSE Version 4

\* z/VSE V3 can operate in 31-bit mode only. It does not implement z/Architecture and specifically does not implement 64-bit mode capabilities. z/VSE V3 is designed to support selected features of IBM System z hardware.

## § Functional enhancements to z/VSE operating system

- ▶ z/Architecture, **64-bit** real addressing, subcapacity, FCP/SCSI, crypto enhancements, more memory, more tasks, more security, etc. etc.

## § Enhancements to z/VSE middleware & tools (few examples only)

- ▶ TCP/IP for VSE
- ▶ VTAM for VSE
- ▶ **DB2 Server for VM and VSE**
- ▶ DL/I
- ▶ WebSphere MQ for VSE
- ▶ **Encryption Facility for VSE**
- ▶ Keyman for VSE
- ▶ SOAP for VSE
- ▶ **VSE Navigator**
- ▶ VSAM Redirector
- ▶ VSE Health Checker
- ▶ CICS2WS
- ▶ **IRMM**
- ▶ DB2 UDB
- ▶ Tivoli Storage Manager
- ▶ **WebSphere Developer for System z**

Items marked in 'blue' have an additional more detailed slide following this one.

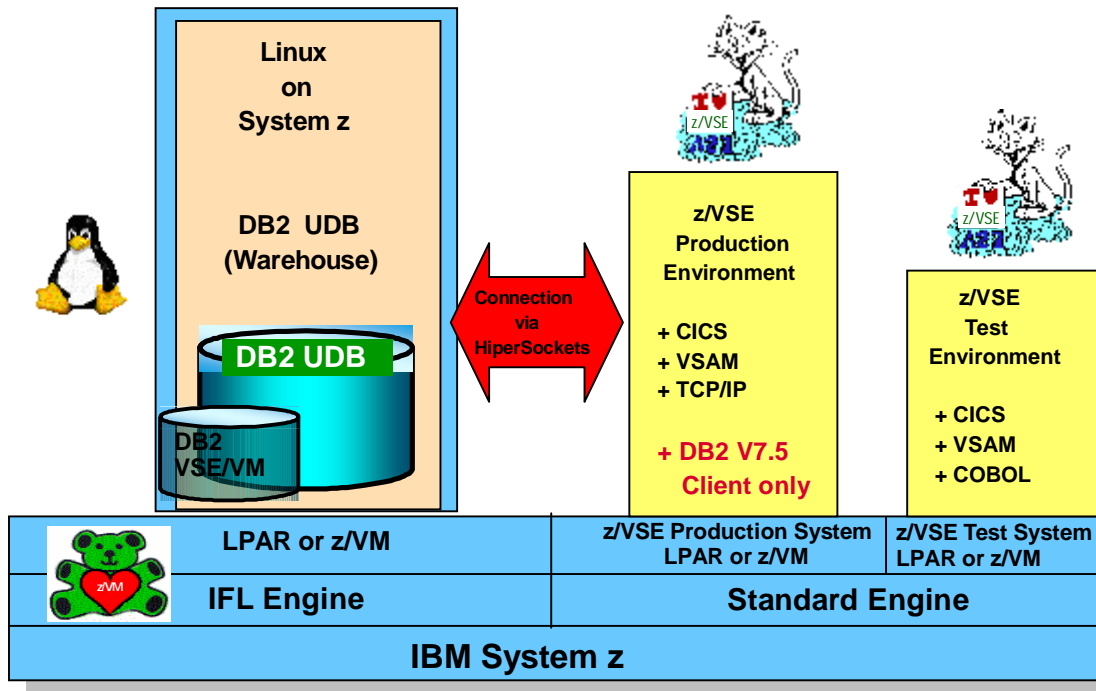
# DB2 for z/VSE and z/VM V7.5

§ In the past, DB2 VSE client functionality could be obtained via PRPQ P10154

§ Now, DB2 offers a runtime only client edition for z/VSE and z/VM (no PRPQ required)

§ Plus performance enhancements, e.g.

- ▶ bind file support
- ▶ reduced DRDA code path length
- ▶ and many more ...





# Encryption Facility for z/VSE V1.1

§ **Announce:** Oct-09-2007

§ **GA:** Nov-30-2007

§ **Optional priced feature for VSE Central Functions V8**

- ▶ requires z/VSE V4.1 or later
- ▶ MWLC-eligible

§ **Requires CP Assist for Cryptographic Function (CPACF)**

- ▶ no charge feature
- ▶ only on z990, z890, z9 EC, z9 BC, and z10 EC servers

§ **Extends affinity between z/VSE and z/OS**

- ▶ function roughly equivalent to EF for z/OS V1.1
- ▶ compatible with EF for z/OS V1.1 (Encryption Facility System z format)
  - EF for z/VSE tapes can be read by EF for z/VSE, EF for z/OS, EF for z/OS Java Client, and Decryption Client for z/OS
  - EF for z/OS V1.1 and EF for z/OS Java client tapes can be read by EF for z/VSE V1.1

§ **Complements z/VSE support for IBM TS1120 tape**

- ▶ TS1120 preferred solution for high volume backup/archive
- ▶ EF option for limited backup/archive and/or exchange with partners with no TS1120



# EF for z/VSE V1.1 (Details)

**IBM Encryption Facility for z/VSE V1.1**  
 Program number: 5686-CF8-40  
 Runs on: System z9 EC, z9 BC  
 zSeries 890 or 990  
 Requires: z/VSE 4.1 (with DY46717) or higher

**IBM Encryption Facility for z/OS V1.1**  
 Program number: 5655-P97  
 Runs on: System z9 EC, z9 BC  
 zSeries 900 or 990  
 zSeries 800 or 890  
 Requires: z/OS 1.4 or higher; z/OS.e 1.4 or higher

Optional Priced **z/VSE** Feature\*

- § Supports encrypting, decrypting, and **compression** of data at rest (tapes, disk).
- § Supports either Public Key/Private keys or passwords to create highly-secure exchange between partners.
- § **Can** use z/OS Java Client or Decryption Client for z/OS for data exchange with client systems or decryption on z/OS.
- § Use [zvse@de.ibm.com](mailto:zvse@de.ibm.com) mailbox for questions about z/OS Java Client and Decryption Client for z/OS when used in conjunction with z/VSE.

**Java Client**  
*Web Downloadable*

Java technology-based code that allows client systems (z/OS and non-z/OS) to decrypt and encrypt data for exchange with z/OS **and z/VSE** systems.

**Decryption Client for z/OS**  
*Web Downloadable*

Decryption only code designed to run on z/OS systems. Can process data encrypted and compressed or just encrypted by the Encryption Facility for z/OS **or Encryption Facility for z/VSE**.

**Feature: Encryption Services**

- Optional Priced Feature\*
- § Supports encrypting and decrypting of data at rest (tapes, disk)
  - § Supports either Public Key/Private keys or passwords to create highly-secure exchange between partners

**Feature: DFSMSdss Encryption**

Optional Priced Feature\*

•Variable Workload License Charges (VWLC, **MWLC**), Entry Workload License Charges (EWLC), zSeries Entry License Charges™ (zELC), Parallel Sysplex® License Charges (PSLC) \*\*Statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

# z/VSE Navigator: Windows-like VSE Interface

File Edit Selected Configuration Functions Help

KEY	FIRMA	TEXT	PLZ
TST010	<-----NEW RECORD	10-----	----
00001	Stinnes-Data-Service GmbH	3	45472
00003	GUILLEAUME-WERK GmbH	5	53229
00004	Zuger Kantonalbank	2	6301
00009	Württembergische Bau BG	4	71032
00013	A.V.U.S. GmbH	3	80339
00014	prego services GmbH	4	66121
00015	Flora Frey GmbH	3	42653
00018	E.ON AG	5	40479
00020	ZF Getriebe GmbH	4	66117
00027	Brunata Wärmemesser GmbH & Co	3	81379
00030	Stadlbauer GesmbH & Co.KG	2	4600
00031	Markenverlag GmbH	4	50968
00037	EnBW Ostwürttemb. DonauRies AG	3	73479
00039	Ravensburger AG	4	88214
00044	SCHNEIDER electronics GmbH		86842
00050	Franz Wiltmann GmbH & Co.KG	5	33775
00051	D M W Datenservice GmbH	4	81377
00053	BG-PHOENICS GmbH	5	80335
00058	Bremer Tageszeitungen AG	3	28195
00060	Steigenberger Rechenzentrum	1	60528
00062	STI	5	36341
00064	Ludwig Schokolade GmbH & Co.KG	5	51469
00066	Motorenfabrik Hatz		94099
00067	Stadtverwaltung Pirmasens	2	66953
00079	Stadtwerke Saarbrücken AG	3	66117
00082	Heidelberger Medien Gestaltung	4	69117

153 row(s) received

CPGQWK Refresh Rename Add ...

0 view(s) loaded 8 data fields in map

# IRMM – announced Aug-7-2007, GA since Sep-14-2007

## § Integrated Removable Media Manager is:

- ▶ A new robust systems management product for Linux® on IBM System z™ that manages open system media in heterogeneous distributed environments and virtualizes physical tape libraries, thus combining the capacity of multiple heterogeneous libraries into a single reservoir of tape storage that can be managed from a central point

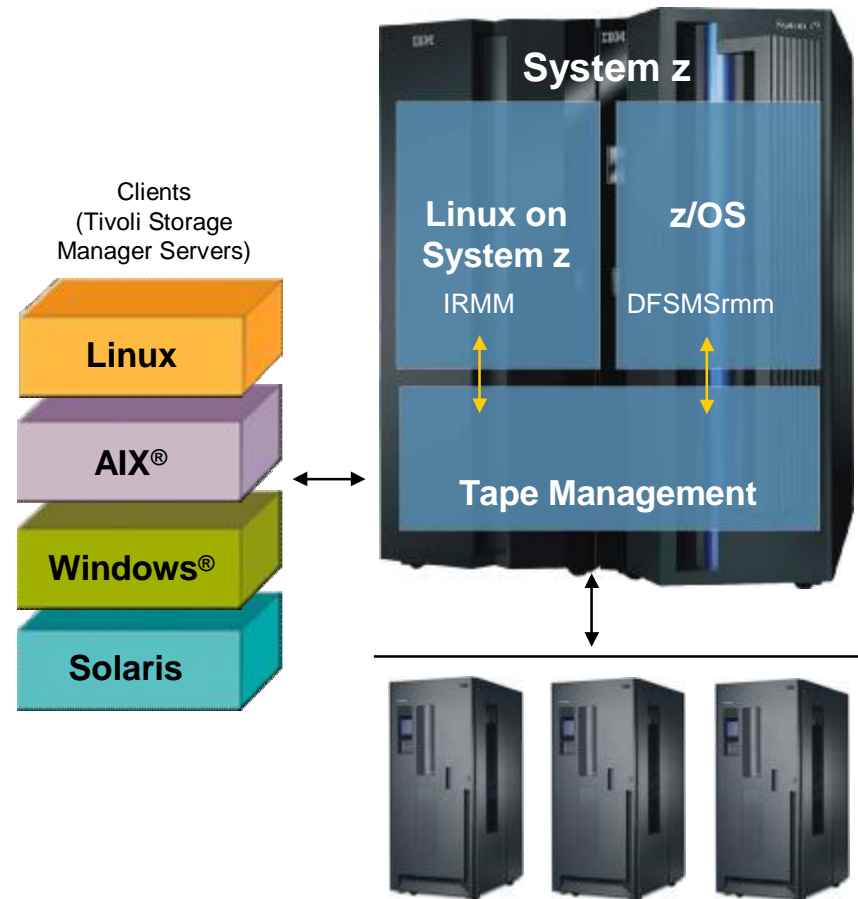
## § IRMM is designed to provide:

- ▶ Centralized media and device management
- ▶ Dynamic resource sharing

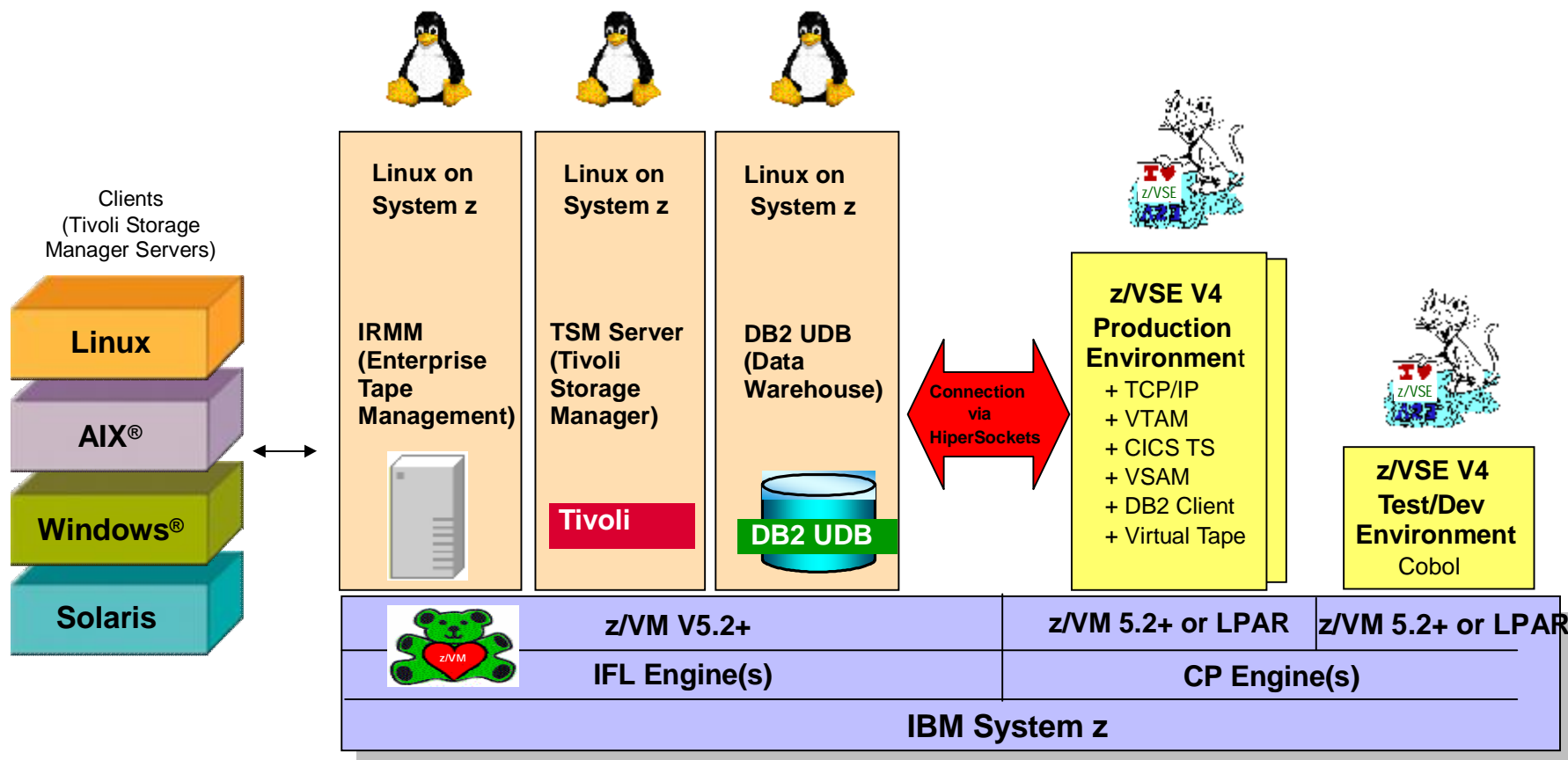
## § IRMM extends IBM’s virtualization strategy to tape library resources

- ▶ Drives and cartridge pools

## § IRMM complements Linux on System z consolidation efforts

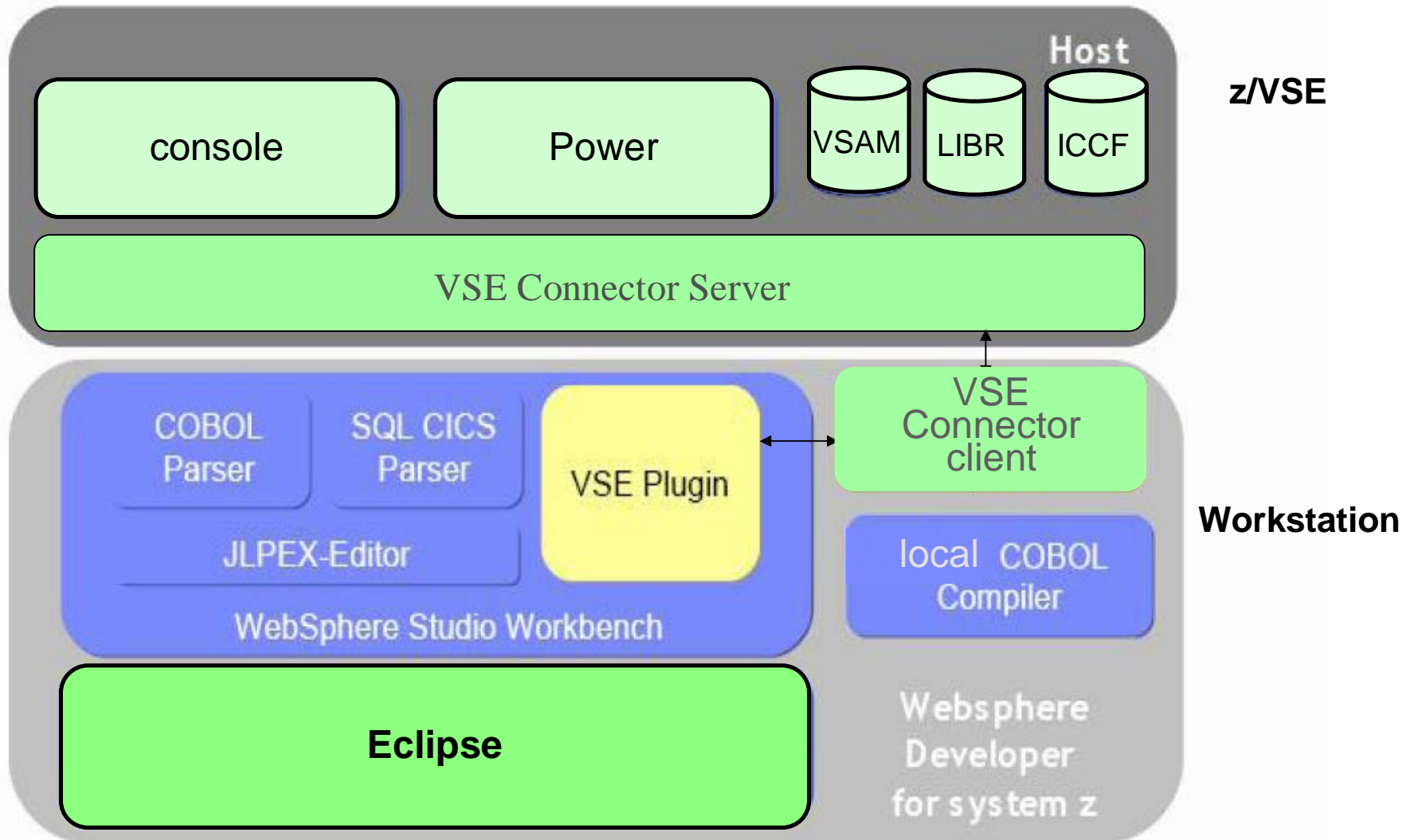


# IRMM in a VM/VSE and Linux Environment



# Application Development for z/VSE and the Enterprise

## Modern Appl Dev with Eclipse and WebSphere Developer for System z



# IBM WebSphere Developer (WDz) in z/VSE Perspective

The screenshot shows the IBM WebSphere Developer (WDz) interface in z/VSE Perspective. The interface is divided into several panes:

- 1.Perspective:** The top toolbar and menu bar.
- 2.View:** The VSE System View on the right, showing a tree structure of system components like VSE Lab, VSE Workshop, and various libraries.
- 3.Projects:** The z/OS Projects pane on the left, showing a tree of projects including .Trp/aeRemote, .BVS, .Java2VSE, .SOAP, .StartApp, .Test, .link, .project, .link.book, PRINTAPP.db, STARTAPP.db, TIMEZONE.db, and Timezone.
- 4.Editor:** The central editor window showing the source code for PRINTAPP.db. The code includes sections for Identification, Data, Working-Storage, Linkage, and Procedure Division.
- 5.Outline View:** The Outline pane at the bottom left, providing a hierarchical view of the program structure.
- 6.VSE Console:** The VSE Console at the bottom, displaying a MAP (Memory Address Page) table with columns for AR, SPACE, AREA, V-SIZE, GETVIS, V-ADDR, UNUSED, and NAME.

AR	SPACE	AREA	V-SIZE	GETVIS	V-ADDR	UNUSED	NAME
AR 0015	SPACE	AREA	7-SIZE	GETVIS	V-ADDR	UNUSED	NAME
AR 0015	S	SDF	744K		0		###SUPI
AR 0015	O	SFA-24	1888K	1748K	83000	768K	
AR 0015	O	EG V	1280K	4864K	500000	45056K	
AR 0015	E	E1 V	1024K	4896K	500000	OK	POWSTART
AR 0015	E	E2 V	2048K	49152K	500000	OK	CICSICCF
AR 0015	E	E3 V	600K	14760K	500000	OK	VTAMSTRT
AR 0015	E	E4 V	2048K	19432K	500000	OK	
AR 0015	E	E5 V	768K	256K	500000	OK	
AR 0015	E	E6 V	256K	256K	500000	OK	
AR 0015	E	E7 V	1024K	19456K	500000	OK	TCPIP00
AR 0015	E	E8 V	2048K	49152K	500000	OK	
AR 0015	E	E9 V	256K	256K	500000	OK	
AR 0015	E	EA V	256K	256K	500000	OK	
AR 0015	E	EB V	256K	256K	500000	OK	SECSEVY
AR 0015	E	SFA-31	7588K	6748K	3700000		

# Agenda

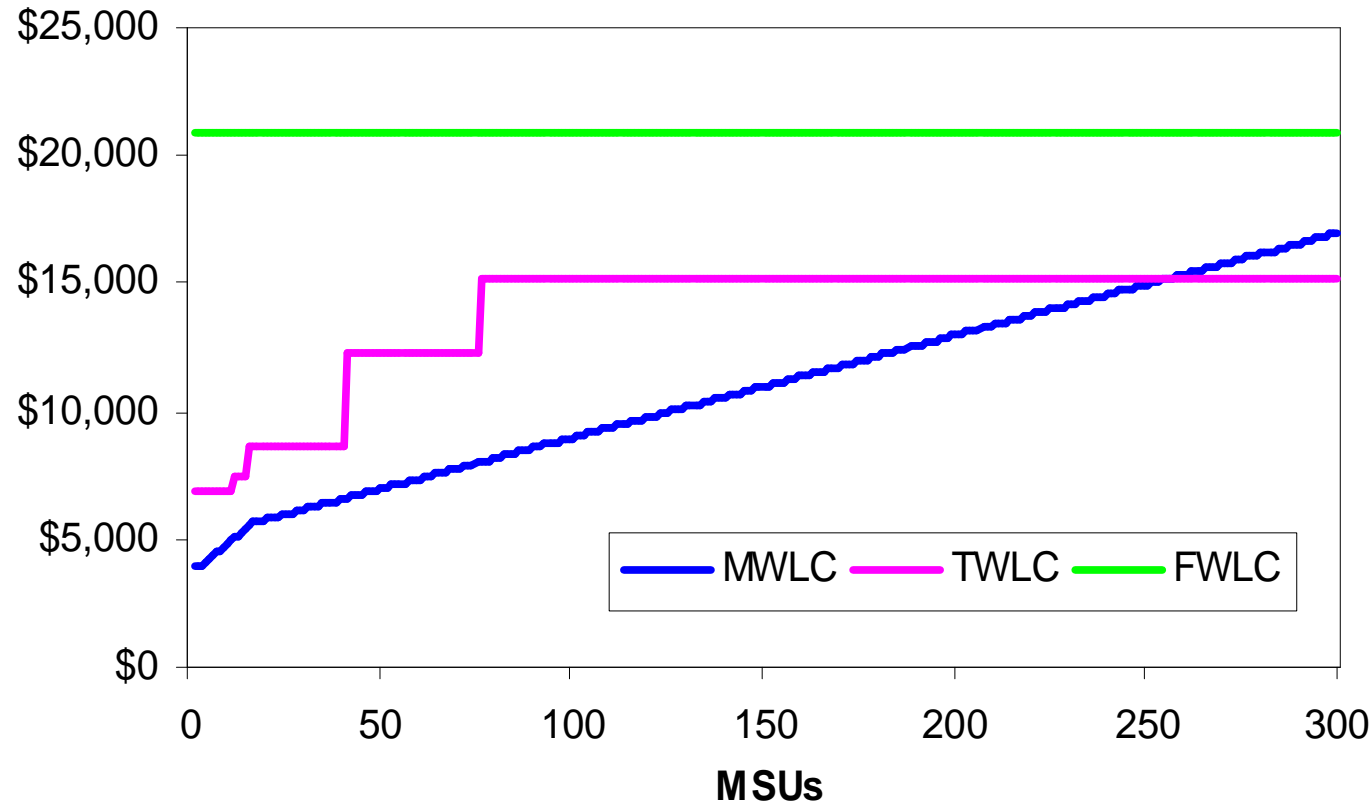
1. Strategy
2. Rebranding
- 3. Pricing
4. Future

## § Customer Examples





# MWLC – Midrange Workload License Charge



§ Customers may choose between MWLC/TWLC or MWLC/FWLC as appropriate to their machine

§ Additional price/performance may be possible with **sub-capacity** mode

§ *“I just got our April software bill from IBM for the first month on our z9 under z/VSE 4.1 and MWLC. We were paying \$22,965 per month on our z800 under z/VSE 3.1.2. The April bill is for the same software and it is \$12,318: a difference of \$10,647 per month.”*  
Mike Moore, IT Manager, Alabama Judicial Datacenter, Alabama

\*Sample software stack includes: VSE CF V8, HLASM, VTAM, DITTO, COBOL

\*Prices subject to change without notice; all prices shown in USD

# Transition to z/VSE V4 MWLC Pricing

## § Basic Requirements

- ▶ IBM System z10 EC, z9 EC or z9 BC (exception: z9 BC A01 is priced zELC)
- ▶ z/VSE V4
- ▶ If running under VM: z/VM 5.2 (or later) is required

**Very simple !**



## § The resulting savings can – and should – be used to invest in new solutions, e.g.

- ▶ SOA
- ▶ Linux on System z
- ▶ new middleware
- ▶ new standard software
- ▶ new application development
- ▶ new projects with IBM

# Transition to z/VSE V4 Sub-Capacity Pricing

## § Basic Requirements

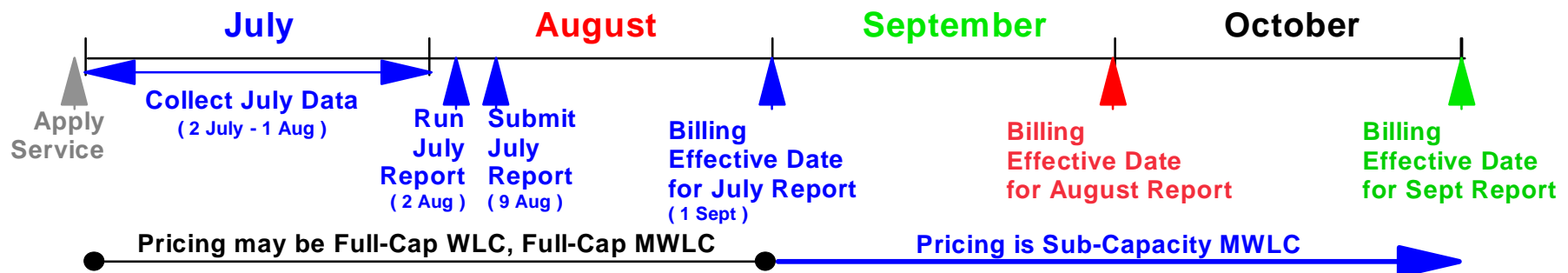
- ▶ IBM System z10 EC, z9 EC or z9 BC (exception: z9 BC A01 is priced zELC)
- ▶ z/VSE V4 (no older VSE version allowed on the processor, i.e. no VSE/ESA V2, no z/VSE V3)
- ▶ If running under VM: z/VM 5.2 (or later) is required

## § Reporting Requirements

- ▶ Must report on all LPARs and z/VM guests (production, test, development, etc.)
- ▶ 95% data collection
- ▶ Default (i.e. worst case) is full-capacity prices
- ▶ 2-month full-capacity transition period

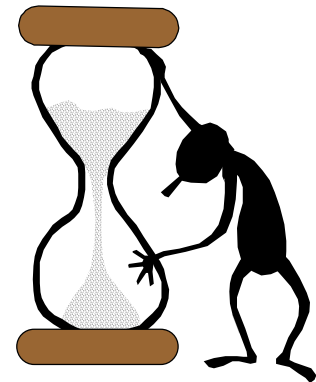
## § Timing Requirements

- ▶ Sub-Capacity Pricing begins with the submission of 1st full month report
- ▶ Data **collection** period: 2nd of the previous month - 1st of the current month
- ▶ Data **submission** period: 2nd - 9th following data collection



## Capacity Measurement Tool (CMT)

- § Announced and available with z/VSE V4.1 since March 16, 2007
- § Can be activated on z9 and z10 servers only
- § Requires z/Architecture mode è z/VSE V4.1 (and later) only
- § Collects data for LPARs and/or guest machines running under z/VM 5.2 (or later)
- § Implemented as a new z/VSE V4 system task
  - ▶ periodically measures CPU usage and calculates MSUs
  - ▶ measurement interval is every 30 minutes
  - ▶ calculates the rolling 4-hour average
  - ▶ creates dataset with SCRT89 records
- § Output from CMT is input for **SCRT**



## Sub-Capacity Reporting Tool (SCRT)



§ Announced with preview announcement of z/VSE V4.2 on Oct 9, 2007

§ Available with z/VSE V4.1 (and later) since Oct 10, 2007

§ Requires SCRT V14.2 (available since Oct 10, 2007) on z/VSE or z/OS

§ Analyzes SCRT89 records as produced by CMT with z/VSE V4

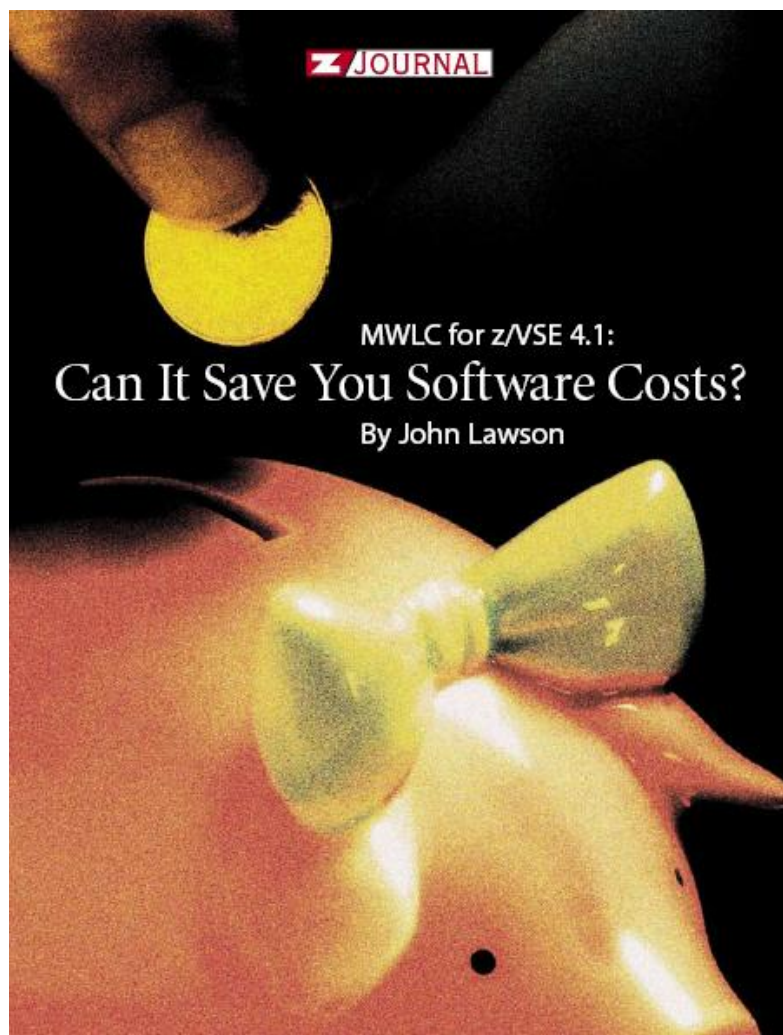
§ Also analyzes SMF70 and SMF89 records as produced by z/OS

§ Customers must generate their SCRT report on a monthly base

§ Customers must send their SCRT report to IBM on a monthly base

§ Output from SCRT is a report, similar to a **spreadsheet report**

# Press & Analyst Papers



Source: z/Journal, April / May 2007

## VSE users receive an offer they can't refuse

Most of the activity in the IBM mainframe world not surprisingly focuses on the z/OS environment, but there is still a sizeable population of users running systems based on VSE, often in conjunction with the VM hypervisor.

Many of these sites are slow growers with limited in-house technical skills and a reluctance to upgrade their hardware or software even in exchange for significant cost savings. As a result their relationship with IBM (and with other ISVs supporting their applications) is a difficult one.

In its recent announcement of z/VSE 4.1, IBM has shown some of the 'carrot and stick' tactics that often characterize its product developments in this part of the market.

The latest version of the operating system offers many attractions for small mainframe users, including some important enhancements to SOA/web service support and tape encryption. Moreover the software is accompanied by a new pricing scheme (Midrange Workload License Charge), which can bring sub-capacity benefits and very significant savings to VSE users. But to get the savings they need to upgrade to a z9 BC or EC.

Even for VSE users, it is becoming increasingly difficult to make a cost case for avoiding an upgrade to the latest hardware, and the months ahead are likely to witness a steady stream of VSE-base upgrades to the z9 BC.

© Arcati Limited, 2007

Source: The Arcati Mainframe Yearbook 2007 33

## z/VSE: A Roadmap For Cost savings and Exploiting Technology

Prepared for:  
IBM Corporation

By:  
Sine Nomine Associates  
43596 Blacksmith Square  
Ashburn, VA 20147

IBM-2007-04569-E-01  
August, 2007  
SNA Proprietary – Confidential

z/VSE Roadmap  
6 September 2007

Source: Sine Nomine Associates, August 2007

# Agenda

1. Strategy
2. Rebranding
3. Pricing
- 4. Future**

## § Customer Examples



## Summary of Changes over the past 12 Months

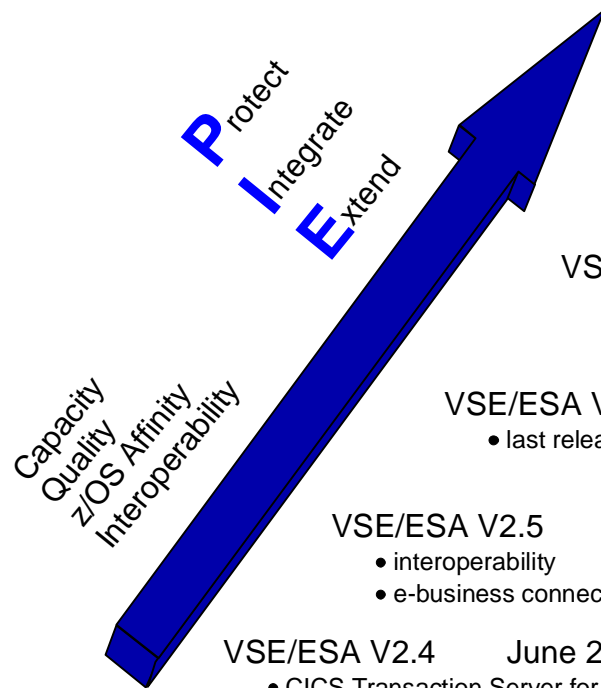
- § 02/28/2007 - End-of-Service for VSE/ESA V2.7 effective
- § 03/16/2007 - z/VSE V4.1 General Availability
- § 03/16/2007 - SecureFTP PTF for z/VSE available
- § 04/18/2007 - IBM System z9 EC and z9 BC Enhancements
- § 05/18/2007 - IBM TS1120 encrypting tape PTF available for z/VSE V4.1
- § 06/05/2007 - End-of-Marketing for z/VSE V3.1 *announced* (effective 5/31/2008)
- § 06/18/2007 - IBM TS1120 encrypting tape PTF available for z/VSE V3.1
- § 07/10/2007 - IBM TS3400 Tape Library attachment to System z
- § 08/07/2007 - End-of-Service for z/VSE V3.1 *announced* (effective 7/31/2009)
- § 08/09/2007 - DL/1 enhancement (up to 10 datasets for HD databases) available
- § 10/09/2007 - z/VSE V4.2 Preview
- § 10/09/2007 - Encryption Facility for z/VSE V1.1 *announced* (available 11/30/2007)
- § 10/10/2007 - SCRT V14.2 available for z/VSE V4.1
- § 11/14/2007 - IBM DB2 Server for VSE & VM V7.5 *announced* (available 11/30/2007)
- § 11/30/2007 - z/VSE V4.1.1 available
- § 01/18/2008 - z/VSE V3.1.3 available
- § 02/26/2008 - IBM System z10 Enterprise Class



**à There is VSE related news every 3 weeks, on average !!!**



# z/VSE: Looking ahead



## z/VSE V4.2 - Preview Oct 9, 2007

- More tasks, more memory
- EF for z/VSE, SCRT on z/VSE
- Sub\*\* for CICS/VSE



## z/VSE V4.1 March 16, 2007

- z/Architecture only
- 64-bit real addressing
- MWLC full & sub-cap pricing



## z/VSE V3.1\* March 4, 2005

- zSeries features, FCP/SCSI
- 31-bit mode only

## VSE/ESA V2.7 March 14, 2003

- enhanced interoperability
- ALS2 servers only



## VSE/ESA V2.6 Dec 14, 2001

- last release to support pre-G5 servers

## VSE/ESA V2.5 Sept 29, 2000

- interoperability
- e-business connectors

## VSE/ESA V2.4 June 25, 1999

- CICS Transaction Server for VSE/ESA
- e-business



•Note: z/VSE V3 can operate in 31-bit mode only. It does not implement z/Architecture and specifically does not implement 64-bit mode capabilities. z/VSE V3 is designed to support selected features of IBM System z hardware.

\*\* All statements regarding IBM's plans, directions, and intent are subject to change or withdrawal without notice.

# z/VSE Next

## § z/VSE V4.2 - previewed Oct-9-2007

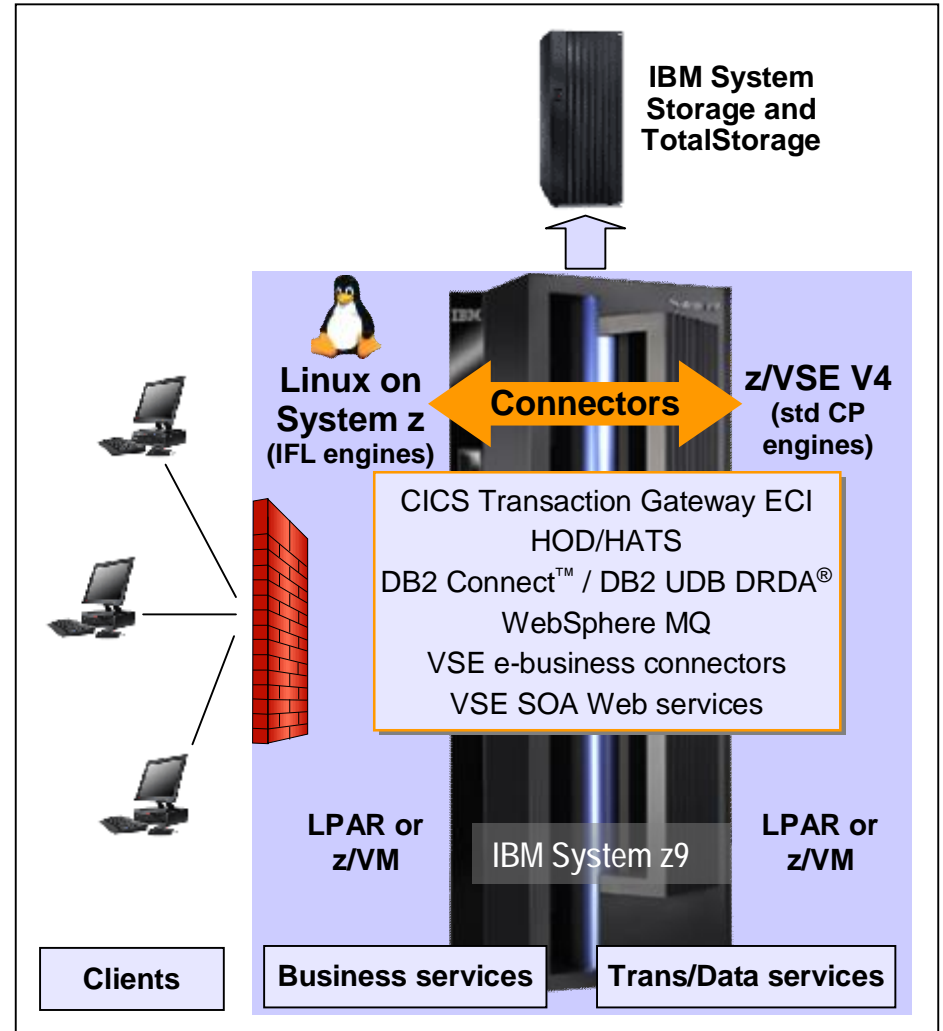
- ▶ Planned availability: 4Q2008
- ▶ IBM System z10 EC, z9 EC and z9 BC servers
- ▶ IBM eServer zSeries 990, 890, 900, 800 servers
- ▶ Up to 32 GB real processor storage
- ▶ More than 255 tasks to enable growth
- ▶ Sub-Capacity Reporting Tool (SCRT) integrated
- ▶ Support for TS3400 Tape Library and TS7740 Virtualization Engine
- ▶ + much more ... (wait for announcement)

## § CICS TS for z/VSE

- ▶ Statement of Direction (SoD)\*\*: z/VSE V4.2 is planned to be the last release to offer CICS/VSE.

à Great services opportunity for BPs!

## No change to PIE Strategy !



\*\* All statements regarding IBM's plans, directions, and intent are subject to change or withdrawal without notice.

# Recent Press Reaction



- HOME
- NEWS
- MARKETS
- MY PORTFOLIO
- TECHNOLOGY
- JOBS
- PERSONAL FINANCE
- LUX

<http://money.cnn.com/news/newsfeeds/articles/marketwire/0317343.htm>

## IBM Continues the Evolution of Its z/VSE Mainframe Operating System

October 19, 2007: 08:01 AM EST



IBM (NYSE: IBM) today announced that the z/VSE mainframe operating system is being updated to help address customer needs for scalability, security and integration. z/VSE V4.2 is designed to support growing mainframe applications and drive stronger investment protection.

"Many customers are beginning to put new Linux applications on the same IBM System z9 mainframe that also runs their production z/VSE applications. This integrated approach is designed to offer the best of Linux, the robust data serving capabilities of z/VSE, and the potential for low total cost of ownership of the System z9 mainframe," said Dr. Klaus Goebel, Development Executive Project Manager and z/VSE PDT Leader. "IBM's powerful mainframe virtualization system, z/VM, is fundamental to these integrated environments. It helps customers get the most from their Linux and z/VSE applications, integrate their business, and support business growth."

Previewed at a special international meeting of the GUIDE SHARE EUROPE (GSE) mainframe user group earlier this week, z/VSE enhancements include a range of new features, especially important to modern applications, such as on-line commerce. Capabilities include:

-- More z/VSE tasks and more real storage designed to improve scalability

- and many more, e.g.**
- § yahoo.com
  - § pressebox.de
  - § verivox.de
  - § boerse-go.de
  - § Wall Street Journal
  - § news.moneycentral.msn.com
  - § marketwatch.com
  - § businessweek.com
  - § smartmoney.com, etc. etc.

The collage shows four screenshots of news articles:

- heise online:** Article titled "IBM verspricht Weiterentwicklung von z/VSE" dated 19.10.2007 16:37. The text mentions that more IBM mainframe users are moving Linux applications to the same mainframe as z/VSE, and that the new z/VSE V4.2 version will support more Linux applications and improve access to z/VSE data.
- CNN Money.com:** The article header "IBM Continues the Evolution of Its z/VSE Mainframe Operating System" and the MarketWatch logo.
- The New York Times:** Article titled "IBM Continues the Evolution of Its z/VSE Mainframe Operating System" dated Sunday, October 21, 2007. The text states that IBM announced the update to the z/VSE mainframe operating system.
- COMPUTERWOCHE.de:** Article titled "Totgesagte leben länger: IBM entwickelt VSE weiter" dated 19.10.2007 um 15:50 Uhr. The text reports that IBM has announced the development of the "Legacy" mainframe operating system z/VSE to be further developed.

# Agenda

1. Strategy
2. Rebranding
3. Pricing
4. Future



## § Customer Examples



## New z/VSE Reference Customers

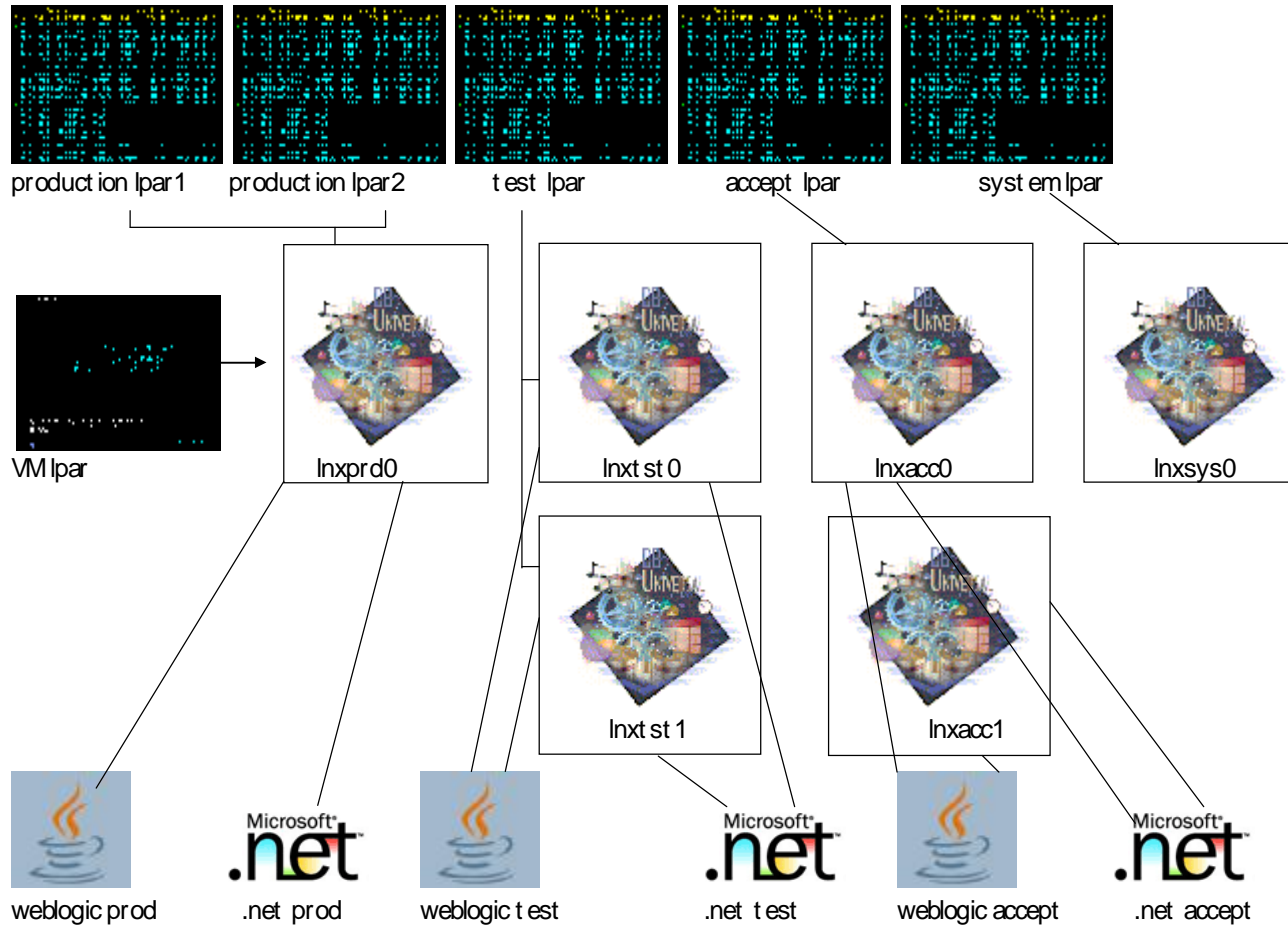
### As a reference available:

- **Wessels & Müller, Germany**
  - z9 BC w/ z/VSE V3, IFL, DB2 UDB
- **Häfele, Germany**
  - z9 BC w/ z/VSE V4, ESS
- **Bau Rechenzentrum, Germany**
  - z9 BC w/ z/VSE V4, DS6000
- **WM Gruppe, Germany**
  - z9 EC w/ z/VSE V3, DB2, DL/1
- **Hypo Real Estate Systems, Germany**
  - z9 BC w/ z/VSE V3, DS8000, TSM
- **American Stock Transfer & Trust, USA**
  - z9 BC w/ migration from DB2 on VSE/ESA to DB2 UDB on Linux
- **Calkins Media, USA**
  - z890 w/ z/VSE V4, ESS, HATS
- **Fratelli Carli, Italy**
  - z9 BC w/ z/VSE V4, IFL, RHEL, DS8000, DB2 UDB

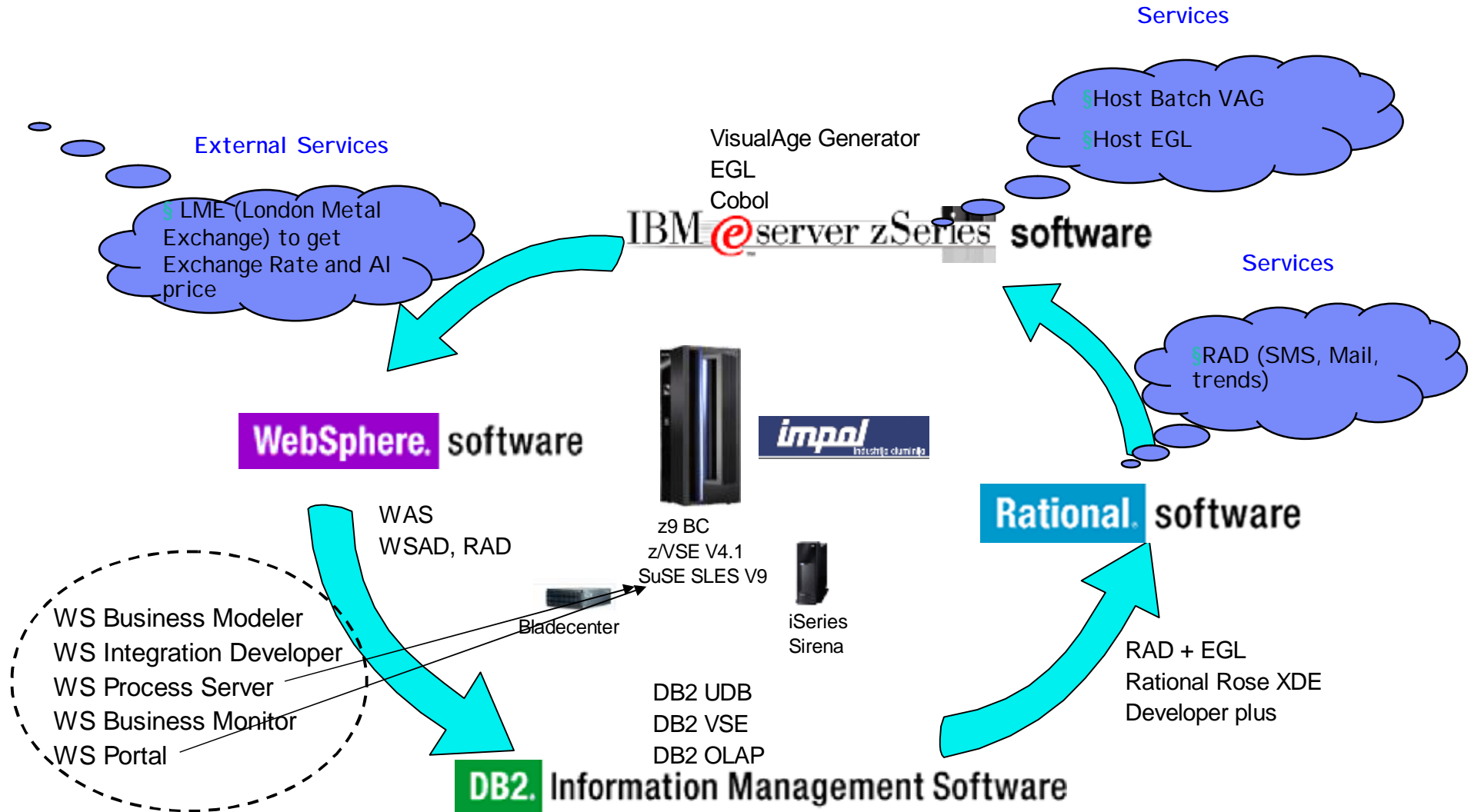
### With case study published:

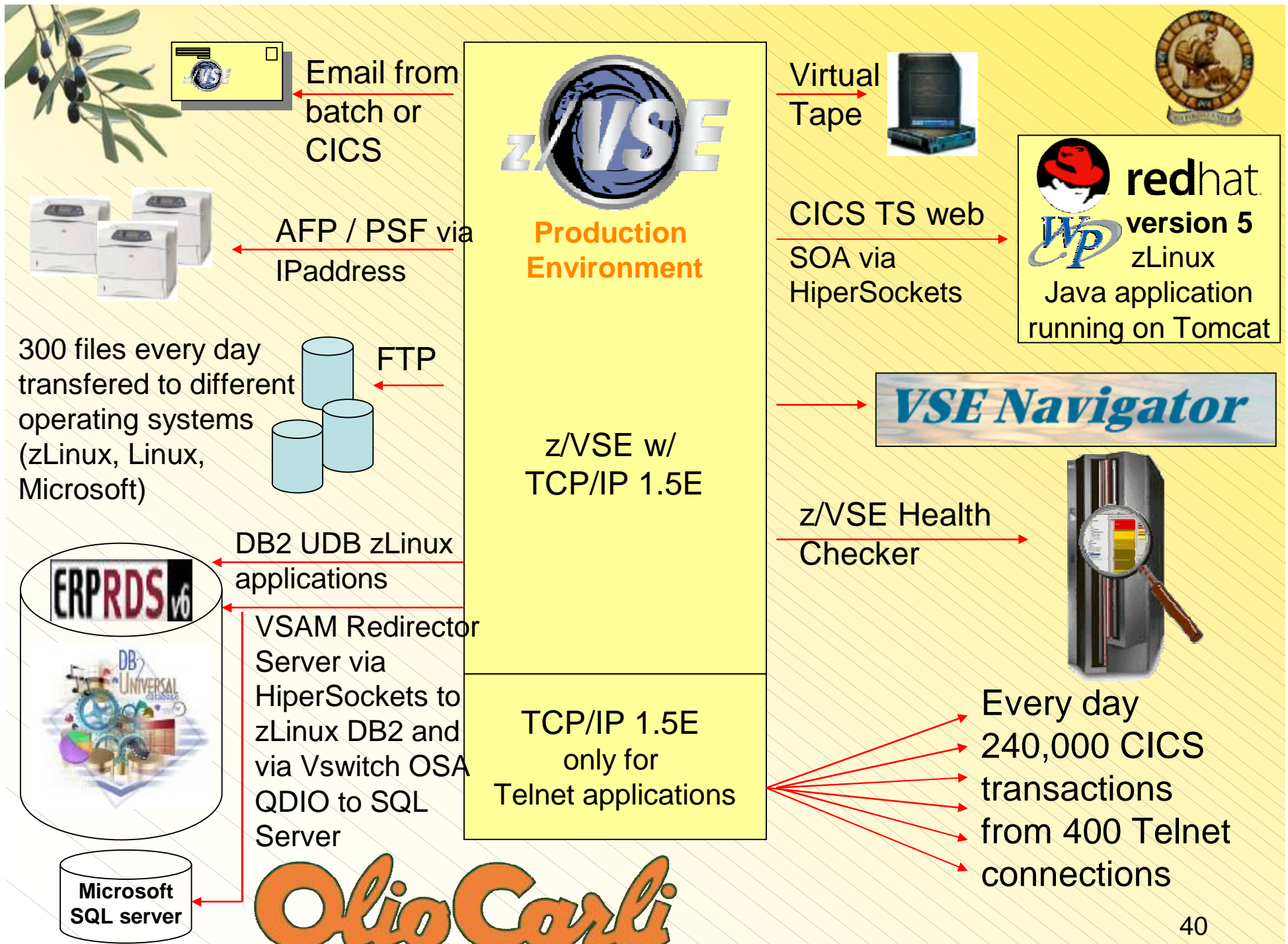
- **Scheidt & Bachmann, Germany**
  - z9 BC w/ z/VSE V4, DS6000
- **Rheinland Versicherung, Germany**
  - z890 w/ z/VSE V3, IFL, DB2, Oracle
- **Edeka Rhein-Ruhr, Germany**
  - z9 BC w/ z/VSE V3, IFL, DB2 UDB
- **Brunata, Germany**
  - z9 BC w/ z/VSE V4, IFL, DB2 UDB
- **GE Money Bank, Switzerland**
  - z890 w/ z/VSE V3, AFP, Macro4
- **Pulsen, Sweden**
  - z9 BC w/ z/VSE V3, 2xIFL, DB2 UDB
- **Securex, Belgium**
  - z9 BC w/ z/VSE V3, IFL, DB2 UDB, BEA Weblogic, WebSphere MQ
- **Alcad, Slovenia**
  - z9 w/ z/VSE V4, IFL, DB2 UDB, SOA, RAD, WDz, WAS, WS Process Server

# Securex, Belgium: Migration from DB2 on VSE to DB2 on Linux on System z



# Alcad/Impol, Slovenia: SOA with z/VSE and Linux







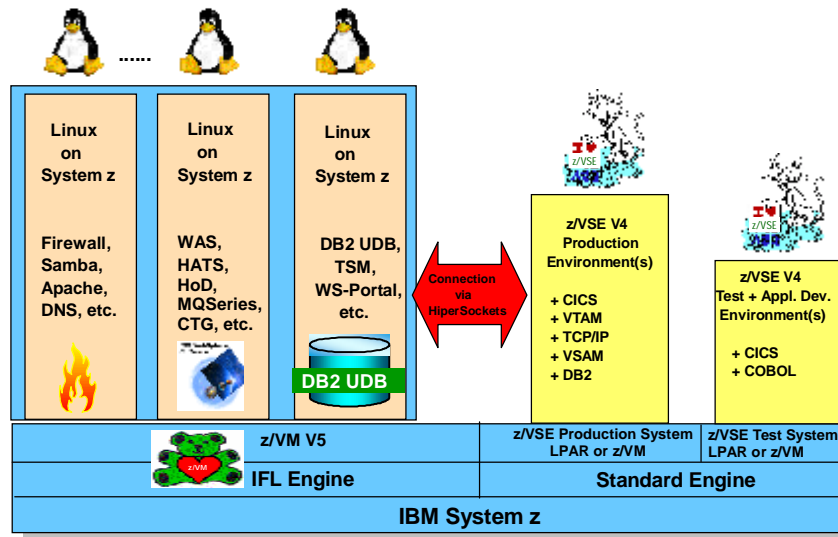
Systems for a mobile world

## Black Belt Success Story: Scheidt & Bachmann

**VSE/ESA 2.2** on **9121-411** w/ **ESS** à **z/VSE 4.1** on **z9 BC A01** w/ **DS6800**



# Summary: Exploiting the Best of all Worlds with System z, z/VM, z/VSE, Linux, System Storage, and IBM Middleware



## § z/VSE V4

- ▶ Protect core IT investments thru PIE
- ▶ Robust, secure enterprise server
- ▶ Cost-effective solutions
- ▶ Interoperability with network / servers
- ▶ Highly improved price / performance

## § z/VM V5

- ▶ Highly flexible, industrial strength
- ▶ Advanced virtualization
- ▶ Multiple z/VSE and Linux images
- ▶ Designed to exploit System z9

## § Linux on System z

- ▶ Large portfolio of new applications
- ▶ Platform for IBM middleware
- ▶ Infrastructure Simplification
- ▶ Massive scalability / consolidation



## Questions ?



Feel free to contact the z/VSE team in the Lab in Boeblingen via:

**[tmcc@de.ibm.com](mailto:tmcc@de.ibm.com)**  
**[boebc@de.ibm.com](mailto:boebc@de.ibm.com)**  
**[zvse@de.ibm.com](mailto:zvse@de.ibm.com)**

- for technical sales support
- for briefings and proof of concept
- for z/VSE consulting and Q&A

## Appendix: For more Information go to ...

## z/VSE and z/VM Customer Conferences in 2008

- § **GSE German Working Group in Bonn (Germany), April 7-9, 2008**
  - ▶ Expect approx 100 attendees, German speaking audience
- § **WAVV in Chattanooga (TN), April 18-22, 2008**
  - ▶ Expect approx 250-300 attendees, mainly from the US
  - ▶ This is the prime conference for VM/VSE and Linux within AG
- § **European IBM System z Technical Conf. in Dresden (Germany), May 5-9, 2008**
  - ▶ Expect approx 1000 attendees, mainly from Europe, thereof approx 20-25 for z/VSE
- § **New for z/VSE: SHARE in San Jose (CA), Aug 10-15, 2008**
  - ▶ Expect approx 1000 attendees, worldwide, but just a very small crowd for z/VSE
  - ▶ SHARE has asked to expand its focus beyond z/OS and z/VM to cover z/VSE, too
- § **IBM System z EXPO in Las Vegas (NV), Oct 13-17, 2008**
  - ▶ Expect approx 1000 attendees, worldwide, thereof approx 20-25 for z/VSE
- § **GSE European Working Group in Leipzig (Germany), Oct 27-29, 2008**
  - ▶ Expect approx 200 attendees, mainly from Europe
  - ▶ This is going to become the prime conference on VM/VSE and Linux within Europe
- § **German IT Manager Summit in Bad Reichenhall (Germany), Nov 20-21, 2008**
  - ▶ Expect approx 70-80 attendees, German speaking decision makers



## z/VSE Live Virtual Classes in 2007/08

- § z/VSE V4 and MWLC Announcement Overview
- § Midrange Workload License Charges (MWLC)
- § z/VSE V4.1 Solutions based on SOA and DB2
- § z/VSE Security
- § z/VSE V4.1 User Experience
- § IBM System z Hardware
- § New VSAM Tools
- § Bringing You up to Date with z/VSE V4
- § z/VSE Wellness
- § Encryption Facility for z/VSE
- § DB2 for z/VM and z/VSE V7.5
- § Modern Application Development for z/VSE
- § Live Demo of WebSphere Developer for System z

§ + more planned ...

§ typically set for Thursday, 5:00 – 6:00 pm

Note: Charts are available on the z/VSE web site the day following each call. Replay available approximately one week later. For more information, please see the z/VSE web site at:

<http://www-03.ibm.com/servers/eserver/zseries/zvse/>



## Information Resources (1 of 2)

### § z/VSE

- ▶ **Homepage:** [ibm.com/servers/eserver/zseries/zvse/](http://ibm.com/servers/eserver/zseries/zvse/)
- ▶ **Solution components:** [ibm.com/servers/eserver/zseries/zvse/solutions/](http://ibm.com/servers/eserver/zseries/zvse/solutions/)
- ▶ **Presentations:**  
[ibm.com/servers/eserver/zseries/zvse/documentation/presentations.html](http://ibm.com/servers/eserver/zseries/zvse/documentation/presentations.html)
- ▶ **Redbooks:**  
[ibm.com/servers/eserver/zseries/zvse/documentation/redbooks.html](http://ibm.com/servers/eserver/zseries/zvse/documentation/redbooks.html)
- ▶ **News & announcements:**  
[ibm.com/servers/eserver/zseries/zvse/news/index.html](http://ibm.com/servers/eserver/zseries/zvse/news/index.html)
- ▶ **Downloads:** [ibm.com/servers/eserver/zseries/zvse/downloads/](http://ibm.com/servers/eserver/zseries/zvse/downloads/)
- ▶ **Consulting and Q&A:** [zvse@de.ibm.com](mailto:zvse@de.ibm.com)

## Information Resources (2 of 2)

### § Optimizing IT

- ▶ **Web page:** [ibm.com/systems/optimizeit](http://ibm.com/systems/optimizeit)
- ▶ **Master Sales kit with presentation and sub-theme sales kits:**  
[ibm.com/PartnerWorld/sales/systems/myportal/s.155/254?navID=f220s240&geoID=All&prodID=IBM+Systems&docID=OITmk.skit&docType=SalesKit&skCat=DocumentType](http://ibm.com/PartnerWorld/sales/systems/myportal/s.155/254?navID=f220s240&geoID=All&prodID=IBM+Systems&docID=OITmk.skit&docType=SalesKit&skCat=DocumentType)

### § Linux on System z

- ▶ **Web page:** [ibm.com/systems/z/linux](http://ibm.com/systems/z/linux)
- ▶ **Sales kit:**  
[ibm.com/PartnerWorld/sales/systems/myportal/s.155/307?navID=f220s240&geoID=All&prodID=IBM%20Systems&docID=zlinuxsk.skit&docType=SalesKit&skCat=DocumentType](http://ibm.com/PartnerWorld/sales/systems/myportal/s.155/307?navID=f220s240&geoID=All&prodID=IBM%20Systems&docID=zlinuxsk.skit&docType=SalesKit&skCat=DocumentType)
- ▶ **Software Vendor Products for Linux on IBM System z:**  
[ibm.com/systems/z/solutions/isv/linuxproduct.html](http://ibm.com/systems/z/solutions/isv/linuxproduct.html)



# Trademarks

**The following are trademarks of the International Business Machines Corporation in the United States, other countries, or both.**

Not all common law marks used by IBM are listed on this page. Failure of a mark to appear does not mean that IBM does not use the mark nor does it mean that the product is not actively marketed or is not significant within its relevant market.

Those trademarks followed by ® are registered trademarks of IBM in the United States; all others are trademarks or common law marks of IBM in the United States.

For a complete list of IBM Trademarks, see [www.ibm.com/legal/copytrade.shtml](http://www.ibm.com/legal/copytrade.shtml):

\*, AS/400®, e business(logo)®, DBE, ESCO, eServer, FICON, IBM®, IBM (logo)®, iSeries®, MVS, OS/390®, pSeries®, RS/6000®, S/30, VM/ESA®, VSE/ESA, WebSphere®, xSeries®, z/OS®, zSeries®, z/VM®, System i, System i5, System p, System p5, System x, System z, System z9®, BladeCenter®

**The following are trademarks or registered trademarks of other companies.**

Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

Cell Broadband Engine is a trademark of Sony Computer Entertainment, Inc. in the United States, other countries, or both and is used under license therefrom.

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

ITIL is a registered trademark, and a registered community trademark of the Office of Government Commerce, and is registered in the U.S. Patent and Trademark Office.

IT Infrastructure Library is a registered trademark of the Central Computer and Telecommunications Agency, which is now part of the Office of Government Commerce.

\* All other products may be trademarks or registered trademarks of their respective companies.

## Notes:

Performance is in Internal Throughput Rate (ITR) ratio based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput improvements equivalent to the performance ratios stated here.

IBM hardware products are manufactured from new parts, or new and serviceable used parts. Regardless, our warranty terms apply.

All customer examples cited or described in this presentation are presented as illustrations of the manner in which some customers have used IBM products and the results they may have achieved. Actual environmental costs and performance characteristics will vary depending on individual customer configurations and conditions.

This publication was produced in the United States. IBM may not offer the products, services or features discussed in this document in other countries, and the information may be subject to change without notice. Consult your local IBM business contact for information on the product or services available in your area.

All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

Information about non-IBM products is obtained from the manufacturers of those products or their published announcements. IBM has not tested those products and cannot confirm the performance, compatibility, or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

Prices subject to change without notice. Contact your IBM representative or Business Partner for the most current pricing in your geography.